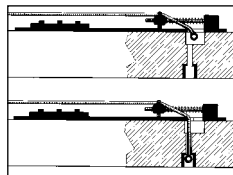
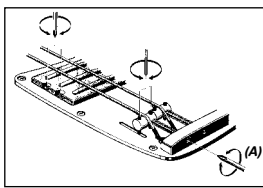


BASS INFORMATION

BRIDGES

ATK

ATK bridges were designed to allow the maximum amount of string vibration to transfer from the body. For slightly more sustain, strings can be installed either from the back of the instrument through the string grommets. For slightly more attack, the strings can be lowered into the bridge from the front of the instrument and hooked onto the string catch.

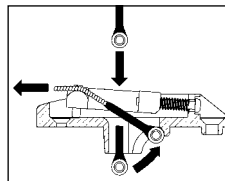
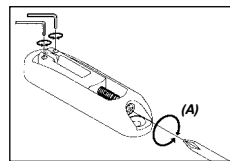


Intonation adjustments can be made by adjusting the intonation screws (A) at the rear of the bridge clockwise to move the saddle back, and counter clockwise to move the saddle forward.

*Note: When replacing string check with the dealer to make sure the new strings are long enough for the full scale length of the bass.

MONO-RAIL II

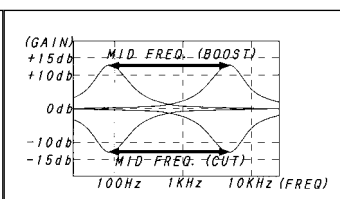
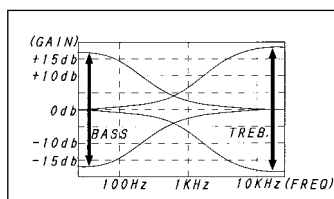
Mono-Rail II bridges allow the bass strings to be isolated from one another by using independent bridge plates for each string. The strings are installed by lowering the ball end into the bridge and hooking the ball end below the string catch at the rear of the bridge.



Intonation adjustments can be made by adjusting the intonation screws (A) at the rear of the bridge clockwise to move the saddle back, and counter clockwise to move the saddle forward.

ACTIVE EQ.

VARI-MID EQ

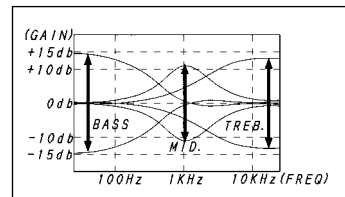


BTB SERIES : VARI-MID 3B

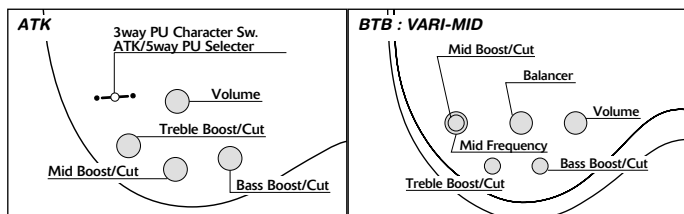
The Vari-Mid 3B EQ was designed to work with passive pickups and is loaded with 18 volts to allow the user to get more output from the bass before distortion.

ATK : 3 BAND EQ

The Ibanez ATK 3 BAND EQ was designed for use with passive pickups and allows the user to control the bass/treble and mid range boost and cut.



BASS CONTROLS

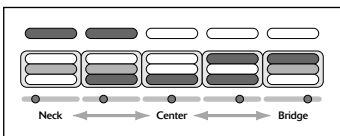


PICKUP SELECTION

ATK : 5 WAY PICKUP CHARACTER SWITCH

The 5 way pickup character switch allows the user five completely different tone positions.

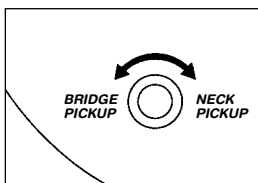
noise cancel coil



ALL 2 PICKUP MODELS : PICKUP BALANCER

The pickup balance control pot allows the user to blend between the front and back pickups using a single pot. The center position of the pot has a de-tent which will set both pickups to equal output.

Turning the knob clockwise increases the neck pickup while decreasing the output of the bridge pickup. Turning the knob counter clockwise decreases the neck pickup and increases the output of the bridge pickup.

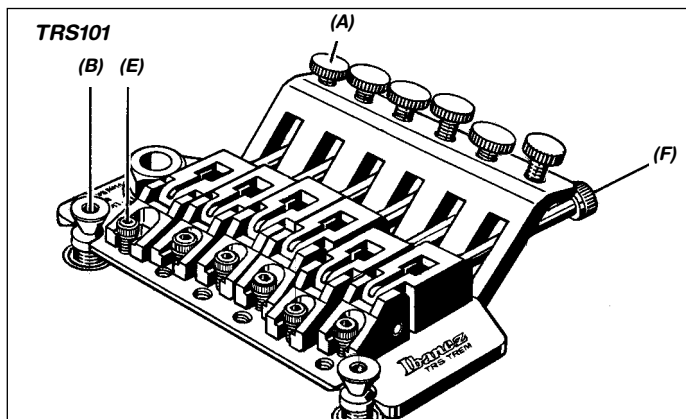


INSTRUCTION MANUAL

ELECTRIC GUITARS AND BASSES

TREMOLOS

S : TRS101 LOCKING TREMOLO



FINE TUNING

After locking the top lock, fine tuning the instrument can be done by turning the fine tuning screws (A).

*To allow maximum fine tuning adjustment, it is recommended that the fine tuners be set to the middle position before locking the nut.

ADJUSTING THE STRING HEIGHT

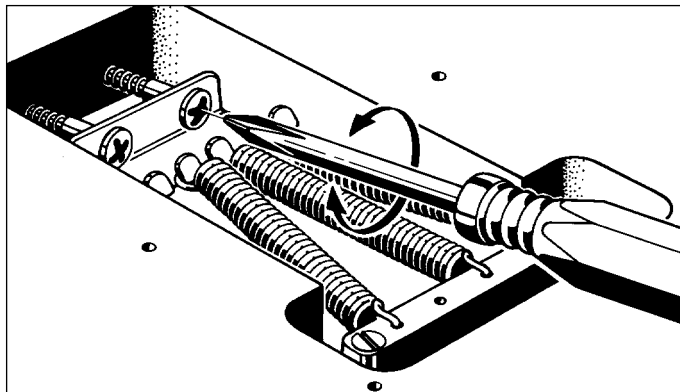
The height adjustment of the tremolo can be raised or lowered by adjusting the pivot studs (B) that the tremolo mounts on. These are located at either side of the front of the bridge. Clockwise lowers the tremolo and counter clockwise raises the tremolo.

ADJUSTING THE INTONATION

Loosen the Pressure pad screw (D) on the locking nut and loosen the string to be adjusted. Loosen the Saddle lock screws (E) on the saddle to be adjusted and adjust the saddle forward or backward. Tighten the Saddle lock screw (E) and tune the string. After rechecking the intonation, tighten the Pressure pad screw (D).

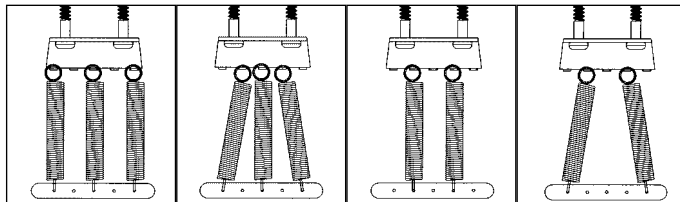
*On the base plate there are two holes for each Saddle lock screw. These allow the user to change string gauges while allowing the maximum saddle movement. If the intonation cannot be adjusted because the saddle needs to be set back further, remove the intonation screw and insert it into the hole located further back on the bridge plate.

ADJUSTING THE TREMOLO SPRING

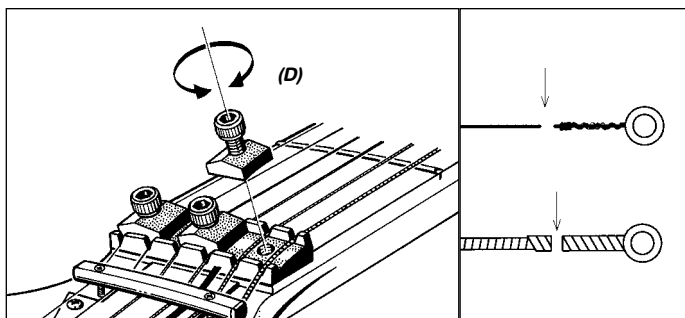


The tremolo springs adjust the tremolo angle by tightening or loosening the tremolo tension. To adjust tremolo angle, locate the adjustment screws in the rear tremolo cavity. The tremolo system when in tune should sit parallel to the surface of the guitar as follows.

If the tremolo system is not sitting parallel to the surface of the guitar, remove the tremolo cavity cover plate and tighten the Tremolo tension adjustment screws if the tremolo is forward dumped. Loosen the screws if the tremolo is up-pulled. Retune the strings to the proper pitch and check the angle. Choose the number and placement of the tremolo springs according to the string gauge and the tremolo angle.



REPLACING THE STRINGS



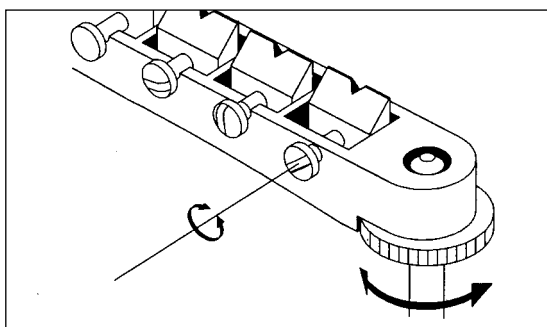
In the case of TRS101 tremolo, replace the strings one by one. Removing all the old strings at once will release the tension on the tremolo and change the tremolo angle "up-pull."

Loosen the Pressure pad screw (D) on the locking nut and loosen the string to be replaced. Loosen the String stopper screw (F) and remove the string from the saddle. Cut off the ball end of new string as shown on the illustration and insert the cut side of new string between the saddle and the String holder block. Tighten the String stopper screw (F) and tune the string. After checking the intonation, tighten the Pressure pad screw (D) on the locking nut.

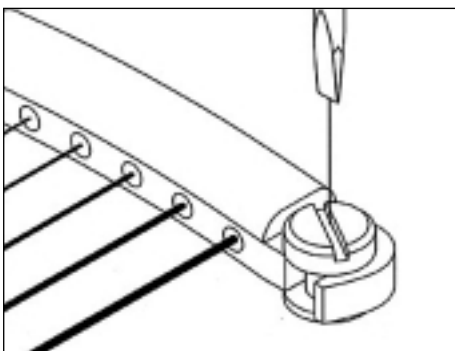
GUITAR INFORMATION

BRIDGES

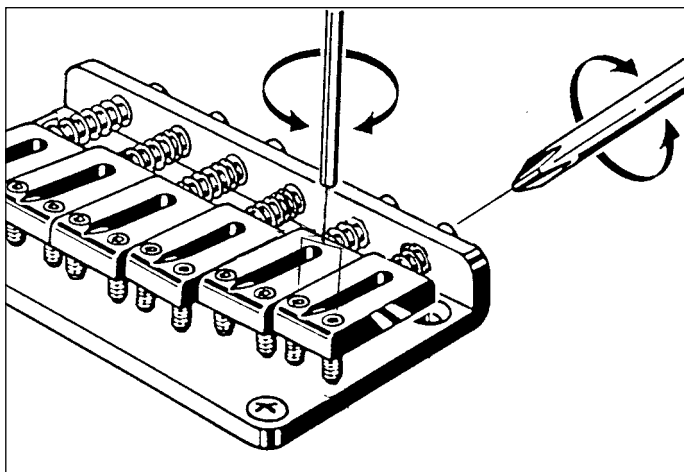
AX, ICX, DTX : FULL TUNE II GUITAR BRIDGE AND STANDARD BAR TAILPIECE



To replace strings, thread the new strings through the string holes located on the back of the tailpiece and bring them up and over the saddle. The intonation can be adjusted by moving the saddle forward or backward using a Slot head (-) screwdriver on the adjustment screw at the rear of the bridge. String height is controlled by raising or lowering the two height adjustment spinners on either side of the bridge. The height adjustment of the bar tailpiece can be raised or lowered using the two height adjustment studs on either side of the tailpiece.



AX : HARDTAIL BRIDGE



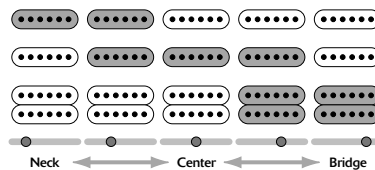
To change strings, thread the new strings through the string grommets located on the back of the guitar and bring them up and over the saddle. The intonation can be adjusted by adjusting the saddle forward or backward using a Phillips (+) head screwdriver on the intonation adjustment screw at the rear of the bridge. String height is controlled by raising or lowering the small Allen screws using a wrench on either side of the saddle.

ELECTRONICS

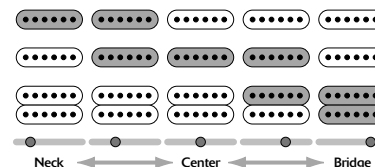
SWITCHING FUNCTION

Ibanez Instruments are unique in the simplicity and versatility of our switching systems. Each model was designed to allow the maximum amount of useful pickup positions with the simplest operations.

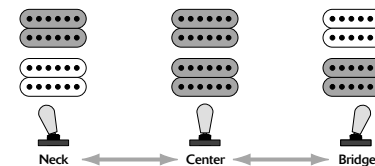
S : 3 PICKUPS(H-S-H)



SA : 3 PICKUPS(S-S-H)

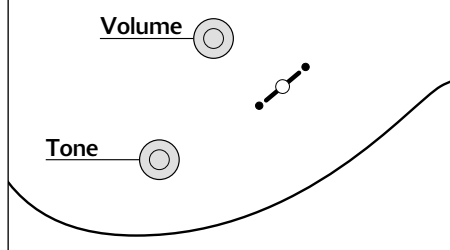


AX, ICX, DTX : 2 PICKUPS(H-H)

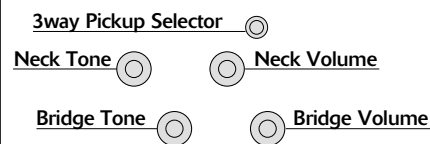


CONTROLS

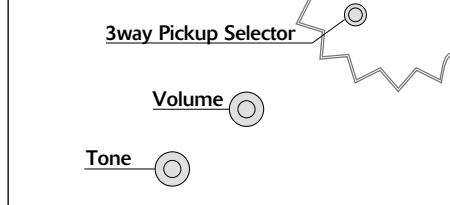
S, SA : 1V, 1T



AX : 2V, 2T



ICX, DTX : 1V, 1T

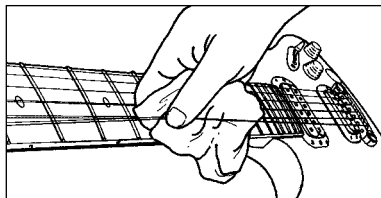


MAINTENANCE

Our congratulations and deepest thanks on making Ibanez your choice of instrument. Ibanez standards are second to none.

All Ibanez instruments are set up to our strict quality control standards before shipping. The purpose of this manual is to explain how to maintain your instrument's finish and to keep your guitar playing as well as it did when it left our factory.

CLEANING



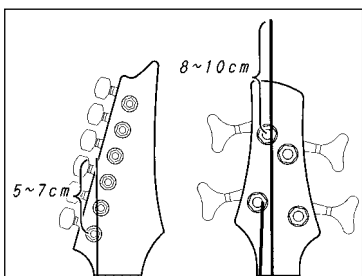
Regular cleaning of your guitar is one the most important ways you can maintain the finish and lengthen string life. After playing, wipe down your instrument to remove any perspiration from the instrument. Perspiration can actually contain acids that can be corrosive to the strings and

metal parts of the guitar. Gloss finish guitars should be polished with polish formulated specifically for musical instruments, and a soft, treated guitar cloth or a cotton rag. Abrasive rags such as polyester can scratch the finish. Oil finished guitars should be wiped clean immediately after playing with a dry cotton rag only. If your guitar has become discolored due to extended use or heavy perspiration, factory appearance, see a qualified guitar repair person about methods to restore the oil finish to its original factory appearance.

STRINGS AND TUNING MACHINES

If strings become dirty, discolored, or produce a dull sound or buzz, replace the strings with new ones. For best results we recommend replacing one string at a time, this will help to avoid removing the string tension from the neck. When replacing strings with different gauge strings, it may be necessary to adjust the truss rod tension. (We recommend only qualified technicians perform this.) Instruments that have tremolo systems installed may need to be adjusted after string replacement as changes in string tension can cause the tremolo to raise or lower. Ibanez guitars and basses are factory equipped with the following

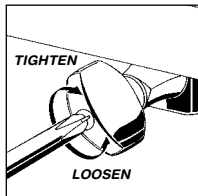
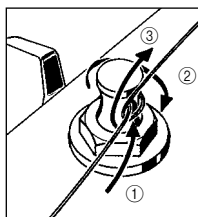
MODELS	STRING GAUGES
ELECTRIC GUITARS	.009-.042"
4-STRING BASSES	.044,.063,.080,.102"
5-STRING BASSES	.044,.063,.080,.098,.121"
35" SCALE 4-STRING BASSES	.045,.065,.085,.105"
35" SCALE 5-STRING BASSES	.045,.065,.085,.105,.130"
35" SCALE 6-STRING BASSES	.030,.045,.065,.085,.105,.130"



string gauges. Please follow the instructions below for your particular model.

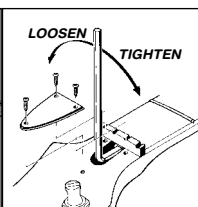
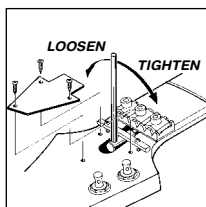
The strings should be tightly wound on to the tuning machines from top to bottom with 2 to 3 string wraps around the post. In the case of unwound guitar strings, the ends of the strings should be prepared as shown in the diagram to prevent unintentional slippage from the posts. In the case of tuned machines, where the string ends are inserted into the posts, the string can be cut to length in advance using a pair of string cutters.

If the tuning machines are sealed gear units, they are self-lubricated types. The set screws for the tuning knob are adjustment screws that can be tightened with a small Phillips head screwdriver to increase the tension.



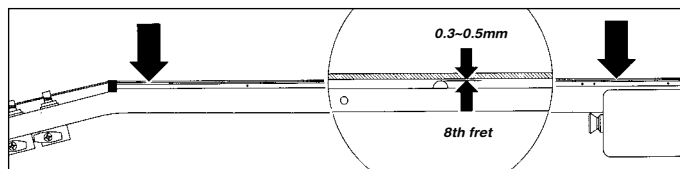
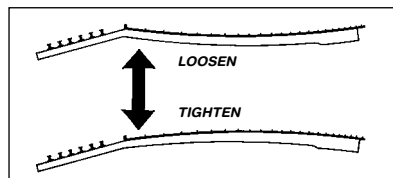
*The use of coarse strings may lead to buzzing and sound distortion. Using strings that have twists or kinks may cause buzzing or decreased sustain. Make sure that the new strings are smooth and free from any defects before installing.

NECK



Ibanez steel string models are equipped with adjustable truss rods. The purpose of a truss rod is to adjust the neck to counteract string tension. There are many reasons for truss rod adjustments. One of the most frequent reasons is changing string

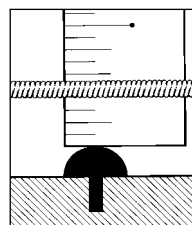
gauges or tuning pitch which can affect string tension. String tension changes may affect the string height and cause fret buzz or notes that don't ring true. To adjust the truss rod, locate the truss rod nut and adjust it by inserting the correct wrench into the nut and tightening (clockwise) or loosening (counter clockwise) the rod. Truss rod tension can be measured by installing a capo at the first fret holding the strings down at the fret position where the neck joins the body. Insert a thickness gauge between the string and the fret at the 8th fret. There should be between 0.3 mm to 0.5mm clearance. That clearance is referred to as "neck relief." Too much neck relief can cause the neck to have higher action in the middle of the neck causing poor intonation and uncomfortable playability. No neck relief can cause fret buzz.



*Appropriate care must be taken when adjusting the neck and we recommend only qualified technicians perform this procedure.

ACTION

Ibanez guitar and bass string action is set at the factory. However there are many reasons that an instrument's string height can change. Instruments can be affected by changes in temperature and moisture. High string action can make the guitar difficult to play. If the string action is too low, fret buzz or unclear notes can occur. To remedy this, follow the instructions for the particular type of bridge installed. In the case of string action, make sure the guitar is in tune and the truss rod is adjusted properly. Ibanez action is set at the 12th fret. The action may also need to be readjusted after the neck has been adjusted or strings have been changed to a different gauge. Follow the instructions in the relevant bridge manual to make adjustments.

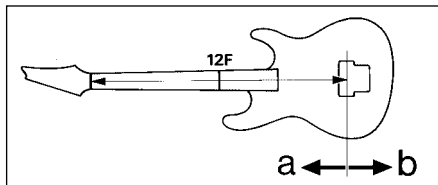


	TREBLE SIDE	BASS SIDE
SOLID GUITARS	1.5mm	2.0mm
FULL ACOUSTIC GUITARS	1.7mm	2.3mm
4-STRING BASSES	2.0mm	2.5mm
5/6-STRING BASSES	2.0mm	2.8mm

*If strings other than those described above are used, gradually increase the action clearance from the treble side through to the bass side.

INTONATION

Intonation adjustment is the operation of adjusting the location of the string at the saddle to compensate for different string gauges or different tunings. Follow the instructions of the particular bridge intonation below. Intonation is properly set when the 12th fret note and the 12th fret harmonic are exactly the same note. This is the center point of the scale and the most accurate way of setting a standard scale length. With the harmonic note as the standard, if the fretted note is flat move the bridge saddle forward toward the headstock (a) to decrease the string length. If the fretted note is sharp, move it back away from the headstock (b) to increase the string length intonation adjustments.



*Please note that strings can be broken when the saddle is moved, so always loosen the strings before making adjustments.

PICKUPS

The output level of the instrument as well as the quality of the signal can be affected by the pickup height. Pickup height should be adjusted until the volume of neck and bridge pickups are almost equal with both volumes wide open. The volume may drop drastically if the pickup height is too low. As the pickups are magnetic, fret buzzing and distortion may occur if the pickup is too close to the strings. Use a small screwdriver to make adjustments to raise or lower the pickup.

*Instruments that have adjustable pole pieces can be adjusted to balance the output of each string.

